

### **REMARKS**

Claims 1-88 will be pending and under consideration upon entry of the present response. Claims 1, 4, 6, 47, 48-51 and 53 have been amended and new claims 66-88 have been added to clarify the invention described in the specification. In particular, claim 1 has been amended to recite that the weight of the hyaluronic acid or the pharmaceutically acceptable salt thereof has a molecular weight from about 1.6 to about 2.2 million daltons. Claims 4 and 6 have been made independent. Claims 47 and 48 have been amended to recite that the composition is administered to the oral cavity. Support for this amendment is found throughout the specification as filed, *inter alia*, at page 4, line 30 to page 5, line 15, page 7, lines 25-26 and page 10, lines 5-7. Claims 49-51 and 53 have been amended to recite from claim 81. None of the amendments made to the claims narrows the scope of the claims or adds new matter.

New claims 66-88 have been added. Support for new claim 66 is found in the specification as originally filed, in particular, at page 10, line 30 to page 11, line 15. Support for new claim 67 is found, *inter alia*, at page 5, lines 5-15. Support for new claim 68 is found, *inter alia*, at page 5, lines 16-27. Support for new claim 69 is found, *inter alia*, at page 5, line 28 to page 6, line 3. Support for new claim 70 is found, *inter alia*, at page 6, lines 4-15. Support for new claims 71-72 is found in the specification as originally filed at page 8, lines 15-19.

Support for new claims 73 and 80 is found in the specification, *inter alia*, at page 1, lines 12-15, and at page 12, line 6. Support for new claims 74-78 and 83-87 is found, *inter alia*, at page 1, lines 12-15, page 6, line 24, and page 12, lines 6-11. Support for new claims 79 and 88 is found in the specification at page 1, line 15 and page 3, line 8. Support for new claim 82 is found in the specification, *inter alia*, at page 12, lines 5-11 and support for new claim 81 is found *inter alia*, at page 7, lines 24-28.

Applicants acknowledge the Examiner's determination that the claims are free of the prior art.

No new matter has been added by the amendments to the claims.

### **OBJECTION TO THE CLAIMS**

Claims 4-7 are objected to as allegedly being of improper form for failing to further limit the subject matter of a previous claim. In response, Applicants have amended claims 4 and 6 to be independent, thus obviating this objection to the claims.

### **REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH**

Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, allegedly as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In particular, the Examiner states that the phrase “having a molecular weight from about 1.6 and 2.2 million daltons” renders the claim confusing, vague and indefinite. In response, Applicants has amended claim 1 to recite “having a molecular weight from about 1.6 to about 2.2 million daltons”, as suggested by the Examiner. In view of this amendment to claim 1, it is believed that this Section 112, second paragraph, rejection has been obviated, and, thus, Applicants request its withdrawal.

### **REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH**

Claims 30-59 are rejected under 35 U.S.C. § 112, first paragraph, allegedly, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. In particular, the Examiner states that, while being enabling for the treatment of inflammation or mucositis, the specification does not provide enablement for the prevention of inflammation or mucositis.

Applicants respectfully disagree. The specification clearly enables the prevention, as well as treatment, of inflammation and mucositis in a patient. The Examiner’s attention is invited to page 20, lines 20-25 of the specification, which states that “the topical administration of a formulation comprising an effective amount of hyaluronic acid, or a pharmaceutically acceptable salt thereof, and polyvinylpyrrolidone provides an effective therapeutical or preventive treatment for mucositis and stomatitis of various origin and severity and, more generally, of the lesions of the oro-pharynx cavity and oesophagus, particularly those caused by dental devices and by radio- or chemotherapy and by surgery.” The specification continues:

Without being bound by a particular mode of action, the favorable therapeutic results obtained by the use of the compositions of the present invention are believed to be due to both the interactions between hyaluronic acid, or a pharmaceutically acceptable salt thereof, and polyvinylpyrrolidone, and the capability of the formulation of adhering to the oral mucosa providing a protective coating for the exposed nerve endings, and thus, reduction of pain and promoting cicatrization and healing of the lesions. Furthermore, it is believed that the moisturizing effect of the compositions has beneficial effect as it protects mucous membranes from further irritating lesions.

Specification, page 6, lines 26-33.

The Examiner's attention is also invited to Example 2 of the specification at pages 11-12, wherein patients having a variety of inflammatory pathologies of the oral cavity were administered the composition of Example 1. As described therein, after the first administration of the composition, more than 80% of patients perceived within a few hours reduction of pain so as to permit food intake. Further, healing of the lesions of the oral mucosa occurred after 3-4 days of treatment in about 60% of treated cases. The percentage reached 90% at the end of one week of treatment.

In Example 3 on pages 12-13, two patients with throat pain (sore throat) who were unable to obtain relief with analgesics or other topical agents, were treated with the composition described in Example 1. Within ten minutes, the patients experienced dramatic relief of their sore throat symptoms, which relief persisted for several hours.

Furthermore, the Examiner is invited to experimental results regarding the treatment and prevention of oral mucositis attached hereto as Exhibit A. Exhibit A describes the medical outcome where patients undergoing chemotherapy are administered the formulation described in Example 1 of the specification to treat or prevent oral mucositis. Four patients were selected on the basis of developing oral mucositis in response to a first cycle of chemotherapy. As explained in the Exhibit, once a patient has developed mucositis in one cycle of chemotherapy, the patient is expected to develop mucositis in subsequent cycles of the same treatment regimen.

Three of the four patients were given Gelclair<sup>®</sup>, a composition of the invention, and one was given a placebo, with instructions to start using the composition or placebo once the first symptoms of mucositis appeared. As can be seen in Table 2, the administration of Gelclair<sup>®</sup> resulted in a significantly reduced number of days of mucositis as compared to placebo indicating that use of Gelclair<sup>®</sup> prevented the appearance of mucositis.

Thus, based on the foregoing, Applicants respectfully submit that the compositions of the invention are able to both treat and prevent inflammation. Therefore, Applicants submit that the claimed invention fully meets the requirements of Section 112, and respectfully request withdrawal of this Section 112 rejection.

### **CONCLUSION**

Applicants respectfully request that the above-made amendments and remarks of the present response be entered and made of record in the file history present application. Applicants submit that presently pending claims 1-88 fully meet all requirements for patentability and respectfully request allowance and action for issuance.

Applicants request that the Examiner call the undersigned at (212) 790-2129 if any questions or issues remain.

Respectfully submitted,

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Enclosures